AF

TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.
ITL.0941US

In Re Application Of: **Matthew Prince, et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/762,849	January 22, 2004	Hadi Shakeri	21906	3723	5852

Invention: **Reducing Wafer Defects from Chemical Mechanical Polishing**

COMMISSIONER FOR PATENTS:

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November 30, 2006

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Dated: **January 18, 2007**

Timothy N. Trop, Reg. No. 28,994
TROP, PRUNER & HU, P.C.
1616 S. Voss Road, Suite 750
Houston, TX 77057
713/468-8880 [Phone]
713/468-8883 [Fax]

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:	Matthew Prince, et al.	Art Unit:	3723
Serial No.:	10/762,849	Examiner:	Hadi Shakeri
Filed:	January 22, 2004	Atty Docket:	ITL.0941US (P15694)
For:	Reducing Wafer Defects from Chemical Mechanical Polishing	Assignee:	Intel Corporation

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APPEAL BRIEF

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Nancy Meshkoff

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REAL PARTY IN INTEREST

The real party in interest is the assignee Intel Corporation.

RELATED APPEALS AND INTERFERENCES

None.

STATUS OF CLAIMS

Claims 1-5 (Rejected).

Claims 6-10 (Canceled).

Claims 11-15 (Rejected).

Claims 16-20 (Canceled).

Claims 1-5 and 11-15 are rejected and are the subject of this Appeal Brief.

STATUS OF AMENDMENTS

All amendments have been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

In the following discussion, the independent claims are read on one of many possible embodiments without limiting the claims:

1. A method comprising:

aging an unthickened silica slurry for at least fifty days from its manufacture date (specification at page 3, lines 10-13); and

using the aged, unthickened slurry to reduce defects when chemical mechanical polishing a tantalum containing layer (specification at page 2, lines 18-25).

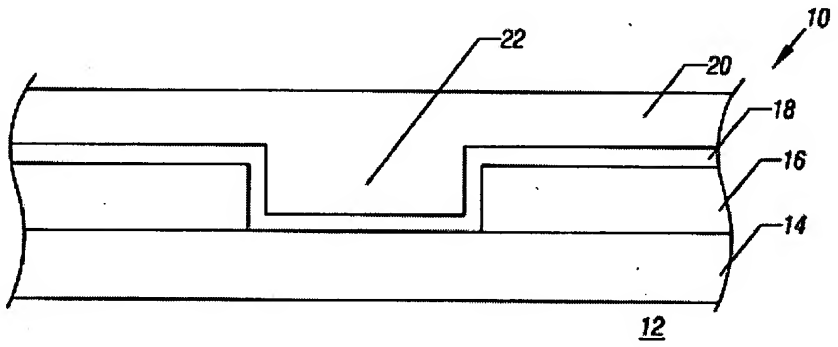

FIG. 1
(PRIOR ART)

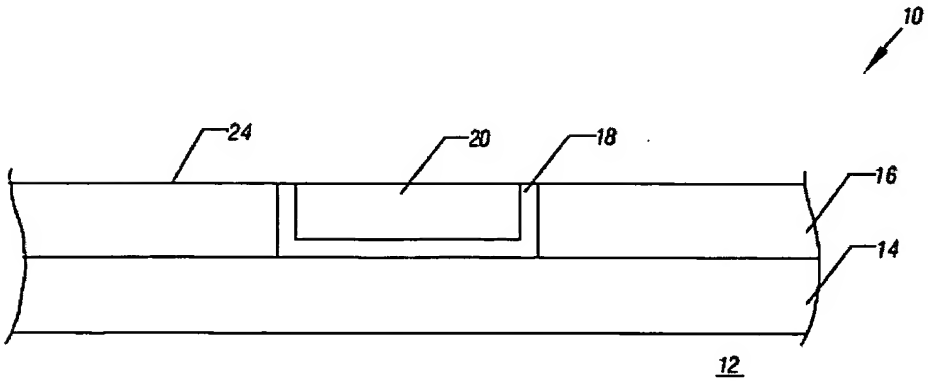

FIG. 2

11. A method comprising:

aging an unthickened silica slurry for at least fifty days from its data of manufacture (specification at page 3, lines 10-13); and

using the aged, unthickened slurry to reduce defects when chemical mechanical polishing a metal layer (specification at page 2, lines 18-25).

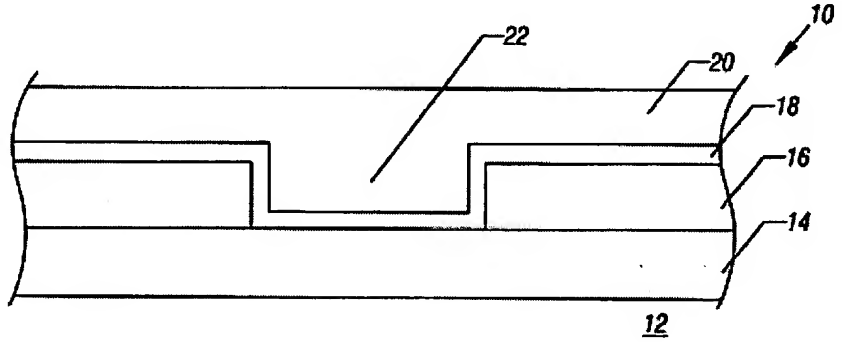

FIG. 1
(PRIOR ART)

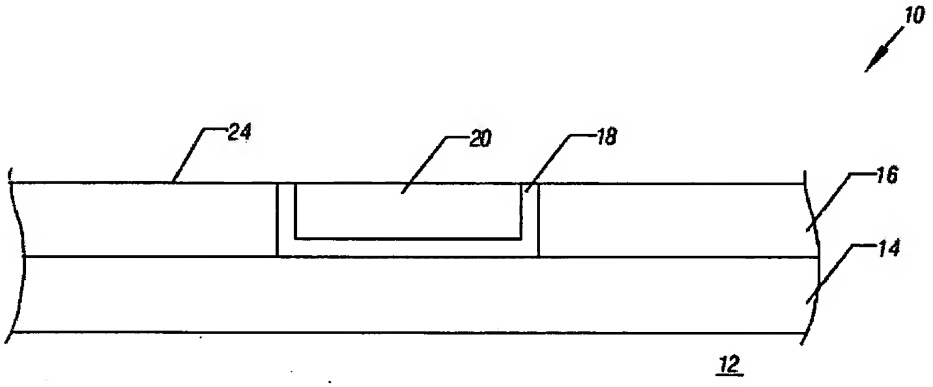

FIG. 2

At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. **Whether claims 1-5 and 11-15 are unpatentable under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement.**

B. **Whether claims 1-5 and 13-15 are unpatentable under 35 U.S.C. § 103(a) over Tredinnick (US 3,715,842) in view of the Applicant's Admitted Prior Art.**

C. **Whether claims 11 and 12 are anticipated under 35 U.S.C. § 102(b) by Tredinnick (US 3,715,842) or, in the alternative, unpatentable under 35 U.S.C. § 103(a) over Tredinnick in view of the Applicant's Admitted Prior Art.**

ARGUMENT

A. Are claims 1-5 and 11-15 unpatentable under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement?

In order to satisfy the written description requirement, the disclosure as originally filed does not have to provide *in haec verba* support for the claimed subject matter at issue. *See Fujikawa v. Wattanasin,* 93 F.3d 1559, 1570, 39 U.S.P.Q. 2d 1895, 1904 (Fed. Cir. 1996). Nonetheless, the disclosure must convey with reasonable clarity to one skilled in the art that the inventor is in possession of the invention. *Vas-Cath, Inc. v. Mahurkar,* 935 F.2d 1555, 1563-4, 19 U.S.P.Q. 2d 1111, 1116-1117 (Fed. Cir. 1991). One skilled in the art, reading the original disclosure, must reasonably discern the limitation at issue in the claims. *Waldemar Link GmbH and Co. v. Osteonics Corp.,* 32 F.3d 556, 558, 31 U.S.P.Q. 2d 1855, 1857 (Fed. Cir. 1994).

One issue raised in the objection is whether it was necessary to state in the present pending application that the slurries were unthickened. The cited reference establishes that it improved the existing slurries by thickening them. Thus, the existing slurries were necessarily unthickened.

Therefore, it would be well known to make unthickened slurries by virtue of the very proof offered by the Examiner to reject the claims. Namely, the cited reference teaches that its improvement is thickening and, therefore, unthickened slurries would be well known to any practitioner in the art. *Loom Company v. Higgins*, 105 U.S. (15 Otto) 580 (1881) (holding that anything that is well known is effectively presumed to be present within the specification). Therefore, there was no need to say that the conventional slurry was unthickened because one skilled in the art would know, absent any other teaching, that the conventional slurry was being referred to. Therefore, the rejection based on enablement cannot lie.

The objection that the term unthickened is indefinite is also noted. However, unthickened means no thickening and, therefore, it cannot be indefinite. The cited reference teaches that conventional slurries have no thickener in there. Thus, the word "unthickened" is absolute and not relative and, therefore, one skilled in the art would know what unthickened means. It means no thickening agent.

Therefore, this rejection should be reversed.

B. Are claims 1-5 and 13-15 unpatentable under 35 U.S.C. § 103(a) over Tredinnick (US 3,715,842) in view of the Applicant's Admitted Prior Art?

The prior art rejection apparently has ignored the "unthickened" limitation. It plainly teaches a thickened slurry. The assertion that it would be obvious to use a thickening agent is noted, but has no impact on the patentability of the claims.

Therefore the rejection should be reversed.

C. Are claims 11 and 12 anticipated under 35 U.S.C. § 102(b) by Tredinnick (US 3,715,842) or, in the alternative, unpatentable under 35 U.S.C. § 103(a) over Tredinnick in view of the Applicant's Admitted Prior Art?

For the reasons set forth under B above, reversal is requested.

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: January 18,2007

Timothy N. Trop, Reg. No. 28,994
TROP, PRUNER & HU, P.C.
1616 S. Voss Road, Suite 750
Houston, TX 77057
713/468-8880 [Phone]
713/468-8883 [Fax]

Attorneys for Intel Corporation

CLAIMS APPENDIX

The claims on appeal are:

1. A method comprising:

aging an unthickened silica slurry for at least fifty days from its manufacture date; and

using the aged, unthickened slurry to reduce defects when chemical mechanical polishing a tantalum containing layer.

2. The method of claim 1 including using chemical mechanical polishing with an aged slurry to form copper metal lines.

3. The method of claim 1 including polishing through a copper layer and a copper seed layer down to a tantalum containing layer.

4. The method of claim 3 including polishing through the tantalum containing layer down to a dielectric.

5. The method of claim 1 including using aged silica slurries to reduce defects when polishing a tantalum containing layer.

11. A method comprising:

aging an unthickened silica slurry for at least fifty days from its data of manufacture; and

using the aged, unthickened slurry to reduce defects when chemical mechanical polishing a metal layer.

12. The method of claim 11 including using the slurry to polish a barrier layer.

13. The method of claim 12 including using the slurry to polish a tantalum containing layer.

14. The method of claim 11 including using chemical mechanical polishing with an aged slurry to form copper metal lines.

15. The method of claim 11 including polishing through a copper layer and a copper seed layer down to a tantalum containing layer.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.